



TESTIMONY OF RENÉE M. WINSKY
Interim Executive Director, Maryland Technology Development Corporation
Before the House Appropriations Subcommittee on
Education and Economic Development
Tuesday, February 8, 2006

Mr. Chairman, members of the Committee, thank you for the opportunity to appear before you to discuss TEDCO's FY2007 budget request. This particular testimony and panel will focus on the portion of TEDCO's FY2007 pertaining to our traditional programs and operations. I will keep my remarks brief because I am joined by:

- Frank Adams, Chairman, TEDCO Board of Directors, and Managing General Partner and Founder of Grotech Capital, Baltimore County
- Tony Fascenda, Founder and CEO of Koolspan, a Montgomery County based telecommunications company

Attached to my written testimony is the following material:

- TEDCO's FY2005 Annual Report
- Information on TEDCO and the Technology Council of Maryland's February 23, 2006 Technology Transfer and Federal Marketplace Event, "Bioscience for Life: Technology to Enhance Health, the Environment and Agriculture," with the Beltsville Agricultural Research Center
- TEDCO's Maryland Stem Cell Research Fund FY2007 Program Proposal (the focus of our second panel today)

To begin, I would like to thank the Administration for increasing TEDCO's traditional program and operations budget by \$1,050,000, which will allow TEDCO to make a half-dozen early-stage seed investments to Maryland's entrepreneurial businesses. In addition, TEDCO's current Working Capital Loan Program, funded jointly by the U.S. Department of Commerce's Economic Development Administration and TEDCO, is assisting incubator type companies in Maryland's underserved areas. Additional funding will allow TEDCO to provide these same types of loans to entrepreneurs in urban areas of the State, making the Working Capital Loan Fund truly a statewide endeavor.

I also thank the Monica Kerns and the Department of Legislative Services for not recommending any cuts to these essential programmatic funds.

The *2005 Annual Report* highlights TEDCO's accomplishments over the past year. However, I would like to offer the following comments:

In FY2005, TEDCO was awarded federal funding for 8 grants totaling over \$3.5 million directly through TEDCO, and with accountability for another \$2.7 million. TEDCO's success in acquiring federal funds for programs in Maryland was documented in the FY2004-FY2006 Annual Report of the Governor's Grants Office, which ranked TEDCO first among all State agencies in the percentage increase in number of grant programs (an 800% increase from FY2004 to FY2005), second in the percentage increase in grant dollars (100%), and among the top ten State agencies in the total increase in number of grant programs and federal grant dollars. TEDCO's Incubator Development Fund continues to stimulate successful new facilities. In FY2005 three new facilities opened: the Silver Spring Innovation Center, the Prince George's County Technology Assistance Center, and the Frederick Innovative Technology Center, with a total square footage of 45,000. In addition, a new facility – the 26,000 sq. ft. Rockville Innovation Technology Center – received a \$1,000,000 commitment from TEDCO's Board of Directors.

Since August 2000, TEDCO has organized 30 technology showcases linking entrepreneurs, investors and researchers with the resources of federal research facilities in the State. In July, 2005, over 350 individuals attended a showcase on Biomedical Technologies in collaboration with the U.S. Army Medical Research and Materiel Command at Fort Detrick. In December, TEDCO organized the state's first targeted event for Small Business Innovative Research winners and applicants, seed and angel fund recipients, and post-incubation stage companies, attended by over 200 individuals. At that same event, it was announced that TEDCO has become one of Larta Institute's first Affiliates and will serve as the Investment Advisor to Maryland companies participating in Larta's NIH-funded Commercialization Assistance Program (CAP) and other programs. Larta Institute is a Los Angeles-based, globally focused nonprofit that manages programs that help companies innovate and grow.

At the request of the Governor's Office of Homeland Security, and with federal funding through the Maryland Emergency Management Agency (MEMA), TEDCO is serving as the managing agent of the newly created All Hazards Consortium, assisting the Board of Directors, providing a web presence, promoting the All Hazards Forum, and meeting with vendors of interest to the State. The All Hazards Consortium will serve as an educational forum and clearinghouse for State and local government officials, educational institutions, businesses and first responders to share information, ideas, strategies, and planning concepts in the field of homeland security and other hazards.

However, perhaps TEDCO's most successful accomplishments come from the investments we make in university technology development and early-stage companies.

For example, TEDCO has been reviewing and funding university proposals focused on translational research through its University Technology Development Fund (UTDF) since 2001. To date, 101 proposals have been reviewed, 64 projects have been funded and 45 projects have been completed under the UTDF. Results have been surprisingly robust – of the total projects, 15 have licensed their technologies to private companies, 10 of which are located in Maryland. Of the 10 Maryland licensees, seven were start-up companies, and six have received TEDCO

follow-on funding through the Maryland Technology Transfer Fund.

TEDCO's focus on companies pursuing technology transfer projects from research institutions, and its rigorous due diligence of candidates, has resulted in companies that are successful in securing third party follow-on funding for technology development and commercialization. To date, 130 proposals have been submitted and 85 projects have been funded through the Maryland Technology Transfer Fund (MTTF). Forty-two completed MTTF projects – reflecting a State investment of \$2,313,544 – have leveraged \$70,385,332 in downstream funding from federal agencies, venture capital, angel investors and other sources – a return of \$30.42 per State dollar invested.

For the second consecutive year, TEDCO was ranked by *Entrepreneur Magazine* (July 2005) as the most active investor – out of the top 100 venture capital firms in the nation – of seed and early-stage companies

TEDCO provides annual reports of the Corporation's activities, including a complete operating and financial statement, to the Governor and General Assembly. As prescribed by statute, TEDCO's Board retains an independent public accountant to prepare audited financial statements. For the sixth consecutive year, TEDCO received an unqualified, i.e., "clean" audit and for the third consecutive year, no management findings.

I'd like to address the a few issues raised by our Department of Legislative Services analyst, Monica Kerns.

Last session the General Assembly asked that TEDCO analyze efforts in competitor states to commercialize technology developed at higher education institutions and federal laboratories. TEDCO commissioned Johns Hopkins Institute for Policy Studies and the State Science and Technology Institute to conduct the study. Maryland and seven other states were evaluated, including Georgia, Massachusetts, Michigan, New Jersey, Ohio, Pennsylvania, and Virginia. The study focused on four areas of state investment:

- University-Focused Technology Commercialization Programs
- Commercialization Assistance to Companies
- Commercialization Financing Assistance to Technology Companies
- Other Technology Commercialization Expenditures

Overall, Maryland leads its competitor states in energy, innovation and breadth in its technology commercialization programs. It has multiple coordinating efforts in university technology commercialization, a robust network of incubators whose capital needs have been generously funded by Maryland and one of the most pioneering programs for seed stage financing in the nation. Maryland has been consistently innovative and its decentralized programs work together effectively. However, the study shows that when spending is normalized to Gross State Product, Maryland is consistently 4th among the comparison states. Simply put, Maryland has been innovating but devoting too little resources to support its innovative programs.

Recent increases to TEDCO and the Maryland Industrial Partnerships program at the University of Maryland are welcome but do not close the gap. For example, if TEDCO had a budget equivalent to the Ben Franklin Program in Pennsylvania when normalized for population, its overall budget would be approximately twice what it is today. The addition of stem cell research funding to TEDCO's mandate does not address this lack of proportional support for technology commercialization programs. It will certainly foster research and development, help in retaining Maryland's prominence in biotechnology, and will lead to commercialization, but will fall short of filling the gap. Maryland has the infrastructure, but additional funding for commercialization is still needed.

DLS has recommended that Committee narrative be adopted requesting that TEDCO report annually on the technology commercialization performance of public universities and their affiliated research parks. TEDCO would be pleased to take on this reporting requirement and will work with the public universities to provide the information requested.

In conclusion, I want to thank members of this Committee for their courtesy toward me and the members of the Board, and for their strong support of this program.



Maryland Stem Cell Research Fund

FY2007

Program Proposal

February 8, 2006

Frank A. Adams, Chairman

Renée M. Winsky, Interim Executive Director

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Maryland Stem Cell Research Fund

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Program Proposal

Introduction

The Maryland Stem Cell Research Fund (Fund) is structured to encourage both fundamental and translational research in pluripotent stem cell science and adult stem cell reprogramming for regenerative therapy. The embryonic stem cell is an all-purpose stem cell that can produce any tissue type, a characteristic known as pluripotency. Adult stem cells are the master cells that build and replenish all cells throughout the human body, but are specific to particular tissue types.

In order to retain Maryland's prominence in biotechnology and establish national recognition in regenerative therapy, the Stem Cell Research Fund will provide for research and development opportunities at Maryland research institutions and private companies in the State to promote the State's national leadership position in stem cell research.

Research Funding

The Maryland Stem Cell Research Fund is intended to fund both discovery and translation of new knowledge in stem cells for therapeutic purposes. The primary providers of basic research into stem cell science are both the public and private universities in Maryland, such as the University System of Maryland and the Johns Hopkins University.

Private businesses are a critical piece of the translational research path. While universities are charged with creation of new knowledge, private businesses are the vehicle for development of innovative new diagnostic tests and therapies for the public. Small businesses, in particular, are the font of innovation in the private sector in America, more able to take higher risks and focus more strongly on development of key innovations. In order to ensure the maximum effectiveness in translating research findings into therapies and diagnostic tools for human health care, the Maryland Stem Cell Research Fund will consider proposals for funding from both universities and private businesses engaged in stem cell research and development activities, as well as joint proposals from university-industry collaborations.

Maryland Stem Cell Research Fund Advisory Board

A Maryland Stem Cell Research Fund Advisory Board will provide policy guidance, ethical oversight, and procedures for review of proposals and oversight of research results. Seven members will be appointed by the Maryland Technology Development Corporation's (TEDCO) Board of Directors and will include a representative from the University System of Maryland, the Johns Hopkins University, a venture capital firm, a biotech company, a federal laboratory, and non-Maryland representatives from two of these categories: university research, venture capital community, and biotech business.

Scientific Review Board

A Scientific Review Board will perform a scientific review of proposals for funding under the Maryland Stem Cell Research Fund. The Scientific Review Board will function insofar as possible in a manner similar to scientific peer review panels of the National Institutes of Health and the National Science Foundation. The Scientific Review Board will be composed of national and international experts in stem cell biology and related fields of research, and be recruited in a manner similar to recruiting for scientific review panels of the NIH and NSF. A part of its membership will be from the bioscience industry with experience in stem cell biology and related disciplines, as well as individuals with experience in entrepreneurial businesses. Members will not come from Maryland institutions.

The Scientific Review Board will be responsible for review of the science and development plans contained in proposals for funding. The Scientific Review Board will establish a specific ranking system to rate proposals and establish guidelines for review and scoring based on nationally recognized scientific review practices. The Scientific Review Board will meet to review and make funding recommendations for proposals received from universities and businesses. Members will be paid travel costs and a modest honorarium for participating on these review panels, as is customary practice. Scientific Review Board recommendations will be forwarded to the Maryland Stem Cell Research Fund Advisory Board, which will make the final funding awards based on the rankings.

Management and Reporting

The Maryland Technology Development Corporation (TEDCO) was created by the Maryland General Assembly in 1998 to “(1) Assist in transferring to the private sector and commercializing the results and products of scientific research and development conducted by colleges and universities; (2) Assist in the commercialization of technology developed in the private sector; and (3) foster the commercialization of research and development...to create and sustain businesses throughout all regions of the State” and “to promote entrepreneurship and the creation of jobs in technology-related industry by establishing and operating effective incubators throughout the State that provide adequate physical space designed, and programs intended, to increase or accelerate business success in the field of technology.” TEDCO’s role is to be Maryland’s leading source of funding for technology transfer and development programs and entrepreneurial business assistance.

The Corporation, a “body politic and corporate and constituted as a public instrumentality of the State,” is governed by a 15 member Board, appointed by the Governor with the approval of the Senate. TEDCO Board members represent the nonprofit research sector (2 representatives), venture capital financing (2), experience in technology-based businesses (5), the general public (3), colleges or universities (2), and the Secretary of Business and Economic Development. All are leaders in their sectors and represent major geographic regions of the State.

TEDCO Board of Directors

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Grotech Capital Corporation

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Steve Walker
Steve Walker and Associates

Anthony C. Wisniewski
MedImmune, Inc.

Renée M. Winsky
Interim Executive Director

TEDCO has developed nationally recognized programs that facilitate the technology development, transfer, and commercialization process. Among its singular accomplishments are the development of linkages with the numerous federal research facilities in Maryland; the attraction of over \$10 million in federal grants from 13 different federal agencies such as the National Science Foundation, NASA, Economic Development Administration, the U.S. Navy, the U.S. Army and the Small Business Administration; and the creation of innovative seed funding programs to fill gaps in the technology transfer process.

TEDCO has been reviewing and funding university proposals focused on translational research through its University Technology Development Fund (UTDF) since 2001. To date, 101 proposals have been reviewed, 64 projects have been funded and 45 projects have been completed under the UTDF. Of the 45 total projects, 15 have licensed their technologies to private companies, 10 of which are located in Maryland. Of the 10 Maryland licensees, seven were start-up companies, and six have received TEDCO follow-on funding through the Maryland Technology Transfer Fund.

TEDCO's focus on companies pursuing technology transfer projects from research institutions, and its rigorous due diligence of candidates, has resulted in companies that are successful in securing third party follow-on funding for technology development and commercialization. To date, 130 proposals have been submitted and 85 projects have been funded through the Maryland Technology Transfer Fund (MTTF). Forty-two completed MTTF projects – reflecting a State investment of \$2,313,544 – have leveraged \$70,385,332 in downstream funding from federal agencies, venture capital, angel investors and other sources – a return of \$30.42 per State dollar invested.

For the second consecutive year, TEDCO was ranked by *Entrepreneur Magazine* (July 2005) as the most active investor – out of the top 100 venture capital firms in the nation – of seed and early-stage companies.

TEDCO has had several years of experience in managing funds for both university and small business research and development. In order to provide appropriate management oversight for the Maryland Stem Cell Research Fund, a dedicated program director/manager and administrative support are needed. This program director/manager will be responsible for design of Requests for Proposals for the research fund, manage meetings of the Maryland Stem Cell Research Fund Advisory Board and Scientific Review Board, manage reporting requirements, and provide overall monitoring of the Fund.

As required under Article 83A, Section 5-2-07 of the Annotated Code of Maryland, TEDCO will provide annual reports to the Governor, the Maryland Economic Development Commission and, subject to § 2-1246 of the State Government Article, to the General Assembly within the first ninety days of each fiscal year on the management of the Fund and any awards made from the Fund.

Funding Proposals

Regular competitions for funding from the Maryland Stem Cell Research Fund will be held. Requests for Proposals (RFPs) will be open to universities and private businesses in Maryland. Awards will be limited to funding of actual research, not research infrastructure.

Proposals for funding under the Maryland Stem Cell Research Fund will be submitted and reviewed using *TEDCO Funds*, TEDCO's on-line proposal management system. Anticipated award levels will be in the range of \$500,000 to \$1,500,000 for research programs up to three years in length. Proposal eligibility and content requirements, as well as submission deadlines for proposals will be determined by the Maryland Stem Cell Fund Advisory Board.

Reports on progress, similar to those necessary for NIH and NSF awards, will be required of all award recipients. These progress reports will be reviewed by the Maryland Stem Cell Fund Research Advisory Board and will be used to direct funding of projects in future years.